

July 3, 1957
Job N-182
N.B.B.

CONSTRUCTION OUTLINE SPECIFICATIONS

FOR

CENTRAL INTELLIGENCE AGENCY

HEADQUARTERS BUILDING

LANGLEY, VIRGINIA

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July 3, 1957

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Construction Outline
Specifications - 1

1. SCOPE:

A. The following outline specification describes the general construction of Main Building, Auditorium, Cafeteria, Power House, two Entrance Gate Houses and Nitrate Film Storage House.

2. CODE REQUIREMENTS:

A. The National Building Code (1955) of the National Board of Fire Underwriters, shall govern the work.

3. EXCAVATION:

A. Include all excavation of earth, rock, boulders and obstructions necessary for the installation of all foundation walls, sub-drainage system, floor construction on earth, pits and trenches and conveyor and duct tunnels, for exterior steps and terraces where adjacent to or integral with structures and for installation of utility lines underground from Power House to the various buildings, and for boiler fuel storage tanks located underground. Stack all topsoil.

B. Include all backfilling around walls and grading immediately around structures to pitch water away from same.

C. Include all excavation required for the installation of mechanical trades within the areas covered by the structures.

D. Include all bracing and sheet piling of banks and all pumping required to keep excavations free of water until foundations are installed.

E. NOTE: The main building site will be leveled by others to elevation +215'-0" and the Power House and Sub-Station will be leveled to elevation + 250.

4. FOUNDATIONS:

A. All foundations for all structures shall be constructed of reinforced concrete, spread footing for walls and columns on soil of suitable bearing quality.

B. Include footing drain of 4" Agricultural Clay Tile and porous fill at bottom of footing around all perimeter walls and court walls and disposal of same in a suitable manner.

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Specification -2

FOUNDATIONS: (Cont'd.)

C. Exterior of foundation walls and footings of structure below grade shall be dampproofed with (3) plies of rag felt and four (4) moppings of hot pitch. On last mopping apply a 1" inch thick layer of asphalt impregnated celotex protection.

5. STRUCTURAL FRAME:

A. Structural frame of main structure including interior and exterior columns and drop heads, two way rib system of floor and roof construction, projecting canopies etc. shall be constructed of reinforced concrete.

B. Auditorium shall be of thin wall reinforced controlled concrete.

C. Cafeteria shall be constructed of structural steel arches and intermediate framing with cellular metal roof deck.

D. Power House shall be constructed of structural steel with reinforced concrete roof and floor slabs.

E. Entrance Gate Houses and Nitrate Film Storage House shall be constructed of reinforced concrete floor and roof slab.

F. All forms for walls where exposed, exposed surfaces of spandrel beams, canopies and other exposed concrete surfaces shall be of plywood and surfaces after stripping left with a smooth even finish.

G. Floor slabs on ground shall be constructed of a slab of 5" thick reinforced concrete, then waterproofed with 3 ply felt and pitch membrane covered by cement protective coat, 1" thick. Install 1" thick rigid asphalt impregnated insulation strip at intersection of floor with exterior walls.

6. CONCRETE FILL AND CEMENT FINISH:

A. Install lightweight concrete fill of thickness indicated with 1" cement finish over all floor and roof construction including ground floor. Underfloor duct system will be installed in this fill.

B. Install cement base where called for on finish schedule.

C. Provide 6x6 10/10 welded reinforcing mesh galvanized over all under-floor ducts.

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7. EXTERIOR WALLS:

A. Enclosure walls and court walls of main building and Power House to extend indicated, shall be constructed of architectural precast stone panels formed in story height units with openings provided for metal sash. Each panel shall be anchored to spandrel beams, top and bottom, by means of angles bolted thru slab and to columns by straps to inserts all as indicated. All inserts in units and structure and all angles, bolts, straps for securement, shall be hot-dip galvanized.

B. All precast stone shall have a facing portion composed of properly crushed and graded opaque and translucent quartz combined with white and/or grey cement as per approved sample.

C. All precast panels shall be reinforced with built-up galvanized welded steel reinforcement, all carefully engineered for all structural stresses and temperature changes.

D. All precast stone shall have a minimum compressive strength of 7500 lbs. psi and a maximum absorption of 5% both at 28 days of age, when tested by a recognized testing laboratory.

E. All facing units shall be set in a non-staining waterproof cement mortar filling all joints. Face joints shall be raked out to a depth of 3/4" and then caulked with "Thiokol" caulking compound to the full depth and tooled.

F. After all panels have been set in place and joints caulked and surfaces cleaned down, all exposed surfaces of facing panels and all other exposed concrete surfaces of all buildings shall be given two (2) uniform coats of colorless Acrylic Resin applied in accordance with manufacturers specifications.

G. Install vertically every fifty feet on center, a Neoprene expansion joint of shape and size indicated.

8. EXTERIOR WALL INSULATION:

A. All exterior walls both cast in place concrete and precast facing panels, shall be given a 1/8" thick asphaltic dampproofing into which a one inch thickness of "Fiberglass" or approved equal rigid insulation with positive vapor seal, shall be applied.

9. ROOFING & SHEET METAL WORK:

A. All roof surfaces of flat roofs and curved roof of Cafeteria shall be covered with a 4 ply 20 year Bonded built-up roofing with slag finish, laid over a two (2") inch thickness of rigid insulation over a two ply felt and pitch vapor barrier.

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ROOFING & SHEET METAL WORK: (Cont'd.)

B. Install four (4) ply felt and pitch waterproofing in Penthouse and Ground Floor Fan Rooms, Kitchen and Pantry areas. Waterproofing shall be carried up on walls back of finish at least six (6") inches.

C. All flashings shall be 16 oz. lead coated copper for cap flashings, 20 oz. copper for base flashings and for covering of concrete copings. Flash around pipe standards of railings, flash at intersection of all roofs with vertical walls and parapets. Copper covering of all projective canopies.

D. Provide counter flashing at top of foundation wall dampproofing. Flashing shall be set in flashing reglets of same material as flashing.

10. AUDITORIUM DOME COVERING:

A. Auditorium dome shall be constructed of reinforced concrete as hereinbefore specified, 2" x 4" sleepers secured to concrete by means of galvanized metal sleeper clips uniformly spaced 24" on centers. Set 2" rigid insulation between sleepers. Cover entire surface with T & G 1" x 6" N. C. pine sheathing securely nailed to sleepers.

B. Over sheathing cover with 30 lb. asphalt felt with joints lapped and cemented and securely nailed.

C. Cover entire roof surface with "Overly" batten aluminum roofing Type AA. Aluminum batten and No. 20 B & S gauge (.032") half hard aluminum sheet "Alrok" finish. Roofing shall be guaranteed for 15 years in accordance with the terms of the manufacturer.

11. INTERIOR STAIRS:

A. Enclosed stairs shall be constructed of steel channel strings, steel risers with integral tread nosing of non-slip abrasive, steel pan treads and platforms, cement filled. Railings of horizontal steel pipe and newels.

B. Ornamental stairs shall have steel stringers, concealed steel treads and risers finished with terrazzo treads and risers, tubular aluminum railings with tubular standards and flush fittings.

C. All surfaces of stairs shall be given a shop coat of iron oxide or zinc chromate paint.

12. WINDOWS:

A. All sash shall be Intermediate Type Steel of dimensions shown on drawings with removable glazing beads/^{out} projecting type for cleaning. Steel

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WINDOWS: (Cont'd.)

fixed sash with removable glazing beads for ground and first floors. All shall be of proper strength to meet Code Requirements. Hardware for operating sash shall be of manufacturer's standard of highest quality.

B. Access to decks shall be by means of tubular steel doors set in frames of assembly.

C. Fixed glass panels of Second and 7th Floors, Cafeteria, and enclosure corridors to Auditorium and Cafeteria shall be constructed of steel rolled sections for frames and mullions provided with removable glazing beads.

D. All surfaces of all steel members shall be hot-dip galvanized and bonderized. Glazing beads secured by means of stainless steel tap screws.

E. All divided sash shall be glazed with double strength flat drawn sheet glass. All other sash and doors shall be glazed with 1/4" thick polished plate glass. 3/8" plate glass for Cafeteria, & Corridors to Cafeteria & Auditorium.

F. All glass shall be set in a "Thiokol" glazing compound.

G. Where interior partitions about the mullions of fixed glass assemblies, a continuous metal closure shall be provided the full height.

H. Alternate Price: Submit alternate price substituting aluminum with aluminized finish in place of galvanized steel for all members of fixed and operating sash and assemblies. All members of equivalent strength.

13. LATHING AND PLASTERING:

A. All exterior walls shall be furred with metal furring braced to wall construction of 1" channels 12" on center with runner at floor and ceiling. Lath shall be 3.4 lb. expanded metal lath. All surfaces shall receive scratch and brown gypsum plaster with hard white finish.

B. Furring and plaster will stop one (1") inch above suspended ceilings where they occur except in secured rooms where masonry partitions extend to structural slab then furring and plaster will extend to slab.

C. Install wire lath and scratch and brown gypsum plaster to close in space around air conditioning pipes running thru exterior wall furred piers. This closure shall be provided on one side of pier only and in secured rooms where masonry partitions occur.

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LATHING AND PLASTERING: (Cont'd.)

D. Provide metal furred and lathed suspended ceilings where indicated. Plastered the same as walls. Purlins shall be 1-1/2" angles or channels suspended 4'-0" x 4'-0" on centers from structural slab. Cross furr with 1" channels and lath as specified for metal wall facing. Plaster with scratch and brown gypsum and hard white finish except where acoustical tile is called for, the white finish is omitted.

E. All masonry block partitions shall be plastered in gypsum with hard white finish. Omit plaster on inside of shafts, stairs, mechanical rooms, building maintenance, shops, garage and incinerator rooms. See Interior Finish Schedule.

F. Install metal lath strip over joints between masonry block partitions and columns.

14. INTERIOR PARTITIONS:

A. The drawings indicate the extent of masonry partitions and all such partitions shall be carried up to structural slab above.

B. Provide fire rated masonry block partitions enclosing elevator, dumbwaiter and conveyor shafts; duct and pipe shafts; stair and toilet enclosure walls; corridors in Basement, Ground and First Floors; electric and telephone closets; mechanical rooms, storage rooms, shops, garage, kitchen, laboratories and incinerators.

C. Masonry block shall be steam cured cinder block or hollow structural clay tile.

NOTE: Rooms enclosed by 8" of masonry shall have the cores of the blocks filled with mortar.

D. Sub-dividing office partitions of masonry block where called for on drawings.

E. Structural ~~block~~ ^{forming the} where called for in Interior Finishes.

F. Except where masonry partitions are called for, all other sub-dividing interior partitions shall be plaster board with joints taped, secured to metal studs. Partition shall stop at underside of acoustical ceilings. Provide the following:

(a) 2-3/8" layers of plaster board each side of metal studs.

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INTERIOR PARTITIONS: (Cont'd.)

- (b) Studs - 2-1/2" size 16" o.c. up to 10'-0" high
Studs - 3-1/4" size 16" o.c. up to 12'-0" high
Studs - 4" size 16" o.c. up to 14'-0" high
- (c) Anchor studs to furring of hung ceiling and add ceiling channels where necessary to pick up partitions. Provide wood blocking as required between top of acoustical ceiling and bottom of ceiling channels.
- (d) Low sub-dividing partitions 5'-4" + high with top 24" of glass, 40" high wood gates with 24" of glass on top. These partitions are also plaster board construction with steel studs similar to U. S. Gypsum "Movable Partitions".

15. TOILET COMPARTMENTS:

A. All toilet compartments and doors to same shall be constructed of hollow metal furniture steel with insulated core. All shall have baked enamel finish and shall be floor mounted and have chrome plated brass hardware.

16. INTERIOR FINISH SCHEDULE:

F-1 A. Office Spaces: Suspended ceiling acoustical tile. Floor 1/8" thick asphalt tile Class "B" patterns. Top set asphalt tile base 4" high. Walls painted.

F-2 B. Toilet Rooms: Floors ceramic tile. Structural ~~glazed block~~ ^{facing tile} to ceiling. Suspended plastered ceiling, painted.

F-3 C. Janitors Closet: Ceramic tile floor and glazed base. Keene cement plaster walls. Exposed ceiling arch.

F-1 D. Public Corridors: Same as office spaces.

F-4 E. First Floor Lobby: ^{VESTIBULE} Suspended plastered ceiling painted. Terrazzo Floor. 7/8" thick marble wall linings floor to ceiling. Allow \$7.00 sq. ft. for domestic marble installed.

F-5 F. Kitchens and Pantries: Quarry tile floor, base and platforms under equipment. Walls structural ~~glazed block~~ to ceiling. Aluminum pan acoustical ceilings.

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INTERIOR FINISH SCHEDULE: (Cont'd)

- F-6 G. Auditorium: Floors and walls same as office spaces. Suspended plaster ceiling to follow contour of dome with acoustical tile applied.
- F-7 H. Cafeteria & Private Dining Rooms: Walls and floors same as office spaces except asphalt tile floor and base shall be grease-proof type. Suspended plaster ceiling to follow contour of curved roof with acoustical tile applied.
- F-1 I. Mail Conveyor Rooms and Freight Elev. Lobbies: Same as office spaces.
- F-8 J. Women's Powder Room & Snack Bar: Same as office spaces except suspended plaster ceiling painted.
- F-9 K. P.B.S. Gear Rooms: Structural ~~glazed~~ ^{facing tile} block to ceiling. Cement floor. Exposed ceiling slab construction.
- F-10 L. Laboratories: Structural ~~glazed~~ ^{facing tile} block to ceilings. ~~Aluminum pan~~ ^{Plaster} acoustical ceiling. Acid-resistant 1/8" Vynal Asphalt tile floor.
- F-11 M. Clinic, Dark Rooms, Photo Labs., Reproduction Rooms, Photostat Rooms.
Same as office spaces except Acid-Resistant 1/8" Vynal Asphalt tile floor and base.
- F-1 N. Class Rooms, I.B.M. Rooms, Libraries & Stack Rooms, Telephone Switch-board Room, Telephone Equipment Room, Conference Rooms, Drafting Rooms, Project Rooms, Projection Rooms, Work Rooms, Interview Rooms, Printing Press Rooms, Mail Rooms, Camera Rooms, Plate Making Rooms, File Rooms. Storage Rooms and Shops except those used for building maintenance and noted in finish "O" and all other rooms not listed below under finish "O". Same finishes as office spaces.
- F-12 O. Paint Shop, Carpenter Shop, Electrical Shop, Plumbing Shop, Machine Shop, Elevator Shop, Trash Room, Public Buildings Service Storage, All rooms and spaces in Basement and Penthouses, Stair Wells, Kitchen Storage in Ground Floor. Cement Floors, masonry walls and structural ceilings painted.
- F-13 P. Locker Rooms: Structural ~~glazed~~ ^{facing tile} block to ceiling. Suspended ceiling acoustical tile. Cement Floor, and raised cement platform for lockers.

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INTERIOR FINISH SCHEDULE: (Cont'd.)

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Q. Shower Compartments: Structural glazed block. Ceramic tile floor and curbs. Sheet lead pans. Hung plaster ceilings painted.

F-15

R. Enclosed Corridors to Auditorium and Cafeteria: Asphalt tile floor and base. Suspended ceiling acoustical tile. Continuous metal enclosures over base convectors.

F-16

17. ACOUSTICAL CEILINGS:

F-17 Private Toilets.

A. Acoustical tile ceilings in Elevator Corridors, Corridors in Cores and Freight Elevator Corridors shall be dry suspended concealed type system.

B. Dry suspended type ceilings using "Acoustone" or equal mineral tile set on exposed Tee runners for suspended ceilings and applied to concrete or plaster surfaces where called for.

C. Flame spread rating for both faces of acoustical tile shall not exceed 75.

18. DOORS & FRAMES.

A. Exterior and Vestibule Doors and Frames:

Aluminum, alumilited finish, tubular construction, gauge 1/8" thick material, glazed, "Rixson" floor hinges, stock push and pull bars, nicalun saddles. Glazed transoms over of same construction as doors.

B. Fire Stairs and Shafts: Hollow metal doors and frames, flush type, Class B. Code Rating.

C. Public Corridors in Basement, Ground and First Floors, Mechanical Rooms, Shops, Storage, Kitchen, Incinerators, Conveyor, Laboratories and Garage:

Flush hollow metal doors and frames, Class B Code Rating.

D. Public Corridors above First Floor: Hollow metal doors and frames, flush type, no rating.

E. Doors in Plaster Board Office Partitions: Hollow metal frames, cellular flush hard wood veneer doors.

F. Doors in Masonry Office Partitions: Hollow metal doors and frames, flush type, Class B. Code Rating.

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DOORS & FRAMES: (Cont'd.)

G. Vault Doors: Having 1 hour Fire Underwriters Label shall be provided in Storage Rooms enclosed by 8" thick masonry walls. There will be a total of 20 of these doors.

H. Elevator Fronts: Passenger Elevators, flush hollow metal by-parting doors and hollow metal frames. Freight, hollow metal frames and 2 speed doors. All Class B - Code Rating.

I. Floor Treadle type pneumatic doors from kitchen and pantries to dining areas.

19. VENETIAN BLINDS:

A. Generally venetian blinds provided throughout, surface mounted type, aluminum slats, plastic tape, steel head.

20. EXTERIOR RAILINGS:

A. Aluminum, rectangular tubular section with flush fittings set in flashing sleeves.

21. GRANITE STEPS & PAVING, MAIN ENTRANCE:

A. Where indicated on drawings, install granite steps and platform paving. Steps shall be cut from the solid granite and provided with wash and seats. Finish of steps 6 cut, set on concrete foundation.

B. Paving shall be random pattern 2 to 3 inches thick set in cement mortar on a concrete slab. Finish shall be rough sawn.

C. Granite shall be Deer Island or nearest available equivalent.

22. RADIATOR AND AIR CONDITIONING UNIT ENCLOSURES:

A. Provide and install over exterior wall air conditioning units. They shall be provided under each window between piers whether A.C. unit exists in opening or not.

B. Provide continuous enclosure over radiator convectors.

C. Enclosures shall be formed of No. 14 gauge furniture steel shop painted. Provide streamline grille in front and stamped grille in top. Front shall be made removable.

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23. AUDITORIUM SEATS:

A. Provide 500 lecture type semi-upholstered with spring arch seat.

24. MISCELLANEOUS IRON:

A. Provide and install the following items with shop coat of Zinc Chromate paint.

- (a) All access doors required for mechanical trades.
- (b) Ladders to all elevator and mechanical pits. Ships ladders and goose neck type to duct and conveyor tunnels and to roofs.
- (c) Gratings, steel bar type set in frame and locked access sections where required.
- (d) Trench covers, set in frame and flush with finish floor surface, sectional, with recessed lifting handles.
- (e) Install 1/4" steel plate wall and column protection at Loading Platforms, also wood and steel bumper combination.
- (f) Loose lintels over doors over 3'-0" in width in masonry partitions.

B. Provide and install the following items constructed of non-ferrous metal.

- (a) Aluminum louvers and screens, leakproof type, in Basement and Penthouse Fan Rooms and in Power House.
- (b) Electrically operated roll up doors for loading docks and Power House. All face work of aluminum Kannear or approved equal manufacture.
- (c) Provide and set two (2) tapered aluminum pipe flag poles complete with pulleys, ropes, etc. mounted in reinforced concrete bases.

25. TOILET ROOM ACCESSORIES:

A. See Plumbing Outline Specification for toilet paper holders, coat hooks, soap dispensers and paper towel cabinets.

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TOILET ROOM ACCESSORIES: (Cont'd.)

B. Include the following items:

- (a) 1/4" thick copper backed plate glass mirror set in narrow chrome plated brass frames in all Men's Toilet Rooms. The mirrors shall be 2'-1" high set over lavatories and shall be the same length as the group of lavatories. (No mirrors over lavatories in Women's Toilets.)
- (b) 9" deep 9'-0" long stainless steel powder shelf with 2'-1" high plate glass mirror the length of shelf in each Women's Powder Room, mirror and frame as specified for Men's Toilets.
- (c) Shelf for handbags etc. attached to door of each Women's W. C. enclosure as shown on Public Buildings Service Standard detail #6-13-30A.

26. HARDWARE:

A. Provide and install following hardware for all interior doors: Aluminum heavy duty cylinder lock and latch sets, exposed type steel door closers, steel butts 1-1/2 prs. to each door. Doors to offices enclosed by Plaster Board Partitions will not require closers.

B. Provide stock grooved aluminum saddles at all interior door openings where there is a change of floor materials between rooms.

C. Hardware for exterior and vestibule aluminum doors specified under Section 18-A.

27. PAINTING:

A. All exposed steel, miscellaneous iron, stairs, etc. shall be given two (2) coats of rust inhibitive paint in addition to prime coat.

B. Other exposed steel surfaces such as radiator and air conditioning enclosures, sash, door bucks, etc. shall receive two (2) coats of metal enamel in addition to prime coat.

C. Hollow metal doors will be factory baked enamel.

D. Masonry walls shall receive two (2) coats of masonry paint.

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PAINTING: (Cont'd.)

E. Plaster surfaces shall receive one (1) coat of primer sealer and two (2) coats of lead and oil paint.

28. SEPARATE PRICE:

A. State amount to be deducted from Bid if the complete construction of Auditorium and glass enclosed corridor leading to same is omitted.

29; SPECIAL REQUIREMENT:

- (a) Stainless Steel electric equipment for kitchens and pantries.
- (b) A pneumatic tube system.
- (c) A.D.T. System
- (d) Incinerators (Heavy duty type)
- (e) Conveyors
- (f) Dumbwaiters
- (g) Lead lining for walls of 2 X-Ray Machine Operator Rooms in first floor. Lead lining for walls, floors and ceiling for Laboratory in 5th Floor.

Copper Mesh.